Translation

PATENT COOPERATION TREATY

PCT/JP2003/014315

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference YCT-887	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/JP2003/014315	International filing date (*day/month/year*) 11 November 2003 (11.11.2003)	Priority date (*day/month/year*) 11 November 2002 (11.11.2002)
International Patent Classification (IPC) or national classification and IPC B29C 39/02, 39/44// B29K 75:00, 105:04		
Applicant SUNSTAR GIKEN KABUSHIKI KAISHA		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☐ *(sent to the applicant and to the International Bureau)* a total of _____ sheets, as follows:

      ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the report
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 17 May 2004 (17.05.2004)	Date of completion of this report 20 October 2004 (20.10.2004)
Name and mailing address of the IPEA/JP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/JP2003/014315

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:

☐ international search (under Rules 12.3 and 23.1(b))

☐ publication of the international application (under Rule 12.4)

☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☒ The international application as originally filed/furnished

☐ the description:

pages _____, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the claims:

pages _____, as originally filed/furnished

pages* _____, as amended (together with any statement) under Article 19

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ the drawings:

pages _____, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELI[redacted]ARY REPORT ON PATENTABILITY

International application No. PCT/JP03/14315

Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	6-10, 16-18, 20-35	YES
	Claims	1-5, 11-15, 19	NO
Inventive step (IS)	Claims		YES
	Claims	1-35	NO
Industrial applicability (IA)	Claims	1-35	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

Document 1: JP 53-9864 A (Matsushita Electric Works, Ltd.), January 28, 1978
Claims; page 1, right column, lines 6-19, examples; Fig. 2
Document 2: US 5834527 A (Maschinenfabrik Hennecke GMBH.), November 10, 1998
Column 3, lines 37-56, Fig. 1
Document 3: Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 49782/1980 (Laid-open No. 149624/1981) (Tokyo Shibaura Electric Co., Ltd.), November 10, 1981, Column 3, line 17 to column 5, line 2
Document 4: US 4765935 A (AFROS S.P.A.), August 23, 1988, Claims
Document 5: JP 2002-192535 A (Toray Industries, Inc.), July 10, 2002, Fig. 1 (Family: none)
Document 6: JP 11-128709 A (Sunstar Giken Kabushiki Kaisha), May 18, 1999, Claims; Par. No. [0001]
Document 7: JP 2000-238053 A (Inoac Corp.), September 5, 2000, Figs. 5, 7
Document 8: JP 55-17519 A (Kokoku Kagaku Kogyo Kabushiki Kaisha), February 7, 1980, Claims
Document 9: JP 5-245856 A (Inoac Corp.), September 24, 1993, Claims; Fig. 1
Document 10: JP 11-226973 A (Bridgestone Corp.), August 24, 1999, Claims; Par. No. [0016]; Fig. 1
Document 11: JP 2003-200442 A (Toyo Tire and Rubber Co., Ltd.), July 15, 2003, Claims; Fig. 1
Document 12: JP 1-145133 A (Mazda Motor Corp.), June 7, 1989, Claims
Document 13: JP 62-122715 A (Toyota Motor Corp.), June 4, 1987, Claims; Figs. 1-3
Document 14: JP 61-235111 A (Meiwa Industry Co., Ltd.), October 20, 1986, Claims; Figs. 2-4

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of Box V:

The inventions relating to claims 1-5 and 11 do not appear to involve an inventive step based on documents 1-3. Documents 1-3 describe appropriately controlling the foaming of a foaming material in an internal space of a mold under pressure.

The inventions relating to claims 6-10 do not appear to involve an inventive step based on document 1. The timing and degree of pressurizing in document 1 can be appropriately selected by a party skilled in the art.

The inventions relating to claims 12 and 13 do not appear to be novel or to involve an inventive step based on documents 1-3. Documents 1 and 3 describe a foam molding device comprising pressurizing means for supplying gas and regulation means.

The inventions relating to claims 14, 15 and 19 do not appear to be novel or to involve an inventive step based on document 1. Document 1 describes regulating an internal space to a predetermined pressurized state by a pipe line and an emission valve.

The invention relating to claim 16 does not appear to involve an inventive step based on document 1. Upon conducting the pressure regulation described in document 1, controlling by measuring a pressure meter is obvious to a party skilled in the art.

The inventions relating to claims 17 and 18 do not appear to involve an inventive step based on documents 1 and 4. Document 4 describes controlling based on the measurement result of a flow meter.

The invention described in claim 20 does not appear to involve an inventive step based on documents 1 and 2. Document 2 describes disposing a pipe line in a region to be filled last.

The invention described in claim 21 does not appear to involve an inventive step based on documents 1 and 5. Document 5 describes providing injection means on one end of a molding mold and a pipe line at the other end thereof.

The invention described in claim 22 does not appear to involve an inventive step based on documents 1 and 6. Document 6 describes a mixing device in which gas is physically mixed with a foaming material.

The invention described in claim 23 does not appear to involve an inventive step based on documents 1 and 7. Document 7 describes an injection nozzle which moves relatively with respect to a mold.

The inventions described in claims 24-27 do not appear to involve an inventive step based on document 1. Document 1 describes conducting foam molding in a pressurized state. In so doing, whether or not to use a lining material and surface covering material is a technical matter a party skilled in the art can appropriately decide according to the product to be obtained.

The invention described in claim 28 does not appear to involve an inventive step based on documents 6 and 8. Document 8 describes heat curing in a state where a foaming material has been injected and joint-pressed.

The invention described in claim 29 does not appear to involve an inventive step based on documents 6 and 9. Document 9 describes pressure injecting a foaming material after cooling a mold and heat curing after foaming.

The invention described in claim 30 does not appear to involve an inventive step based on documents 6, 9 and 10. Document 10 describes using a vacuum pump in the foam allowance process.

The invention described in claim 31 does not appear to involve an inventive step based on documents 6 and 11. Document 11 describes conducting foam molding while depressurizing an internal space.

The invention described in claim 32 does not appear to involve an inventive step based on documents 6, 11 and 12. Document 12 describes conducting pressure molding and heat curing after injecting a foaming material.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of Box V:

The invention described in claim 33 does not appear to involve an inventive step based on documents 6, 11 and 13. Document 13 describes causing molds to move apart from each other and conducting heat curing after injecting a foaming material.

The inventions described in claims 34 and 35 do not appear to involve an inventive step based on documents 6 and 14. Document 14 describes forming a clearance by slightly opening a mold after molding a first layer, and by injecting a second layer material in the clearance, foaming a cover over the foam molding body on the surface thereof. The question of whether to make the first layer or the second layer the foam layer is a technical matter that a party skilled in the art can appropriately select.